

U.S. Patent Application No.: 10/694,974  
Art Unit: 1714  
Page 6

RECEIVED  
CENTRAL FAX CENTER  
NOV 09 2006

### REMARKS

Claims 21, 30, and 41 have been amended to more clearly define Applicant's invention. In particular, both of these claims have been amended to recite that the organic group comprises at least one ionic group, at least one ionizable group, or a mixture thereof. Claims 23 and 36 have been cancelled in view of this amendment. Furthermore, new claims 42 and 43 have been added to recite specific embodiments of the non-aqueous coating composition of the present invention, wherein the non-aqueous solvent comprises 0-20% water. These new claims are fully supported by the present specification and claims as originally filed, including, for example, paragraph [0039]. No new matter has been added. Thus, claims 21, 24-34, and 37-43 are pending.

### Claim Objections

In paragraph 4 of the Final Office Action, the Examiner states that, should claim 30 be found allowable, claim 41 would be objected to under 37 C.F.R. 1.75 as a substantial duplicate thereof.

However, Applicant does not believe these claims are duplicates. In particular, claim 30 recites a non-aqueous coating composition comprising a) a non-aqueous vehicle, b) at least one pigment, and c) at least one dispersant composition which is further recited in the claim. By comparison, claim 41 recites a non-aqueous coating composition comprising a) a non-aqueous vehicle and b) a pigment composition, which is further recited in the claim. Thus, the two claims recite different non-aqueous coating compositions and are therefore not substantial duplicates of each other.

U.S. Patent Application No.: 10/694,974  
Art Unit: 1714  
Page 7

RECEIVED  
CENTRAL FAX CENTER  
NOV 09 2006

**Rejection of Claims under 35 U.S.C. § 103**

**Nyssen**

The Examiner has rejected claims 21, 23-28, 30-39, and 41 under 35 U.S.C. § 103(a) as being unpatentable over Nyssen (WO 00/60015).

In paragraph 5 of the Final Office Action, the Examiner incorporates by reference the rejection set forth in paragraph 8 of the Office Action mailed March 30, 2005. In addition, in paragraph 7 of the Final Office Action, the Examiner states that Applicant's arguments filed September 23, 2005 have been fully considered by are not persuasive as follows:

(A) The Examiner states that Applicant has argued the surface modified carbon products including carboxyl-containing carbon black are not the presently claimed modified carbon products since they do not contain an organic group. However, the Examiner further states that carboxyl groups contain carbon and are therefore organic. In addition, the Examiner notes that paragraph [0030] of the present specification states that representative attached groups include -COO- and -COOH.

(B) The Examiner states that Applicant has argued, since Nyssen relates to aqueous coating compositions, it cannot render obvious the presently claimed non-aqueous coating composition. However, the Examiner further states that the term "non-aqueous coating composition", when read in its broadest light, describes a coating composition which contains non-aqueous solvents but does not exclude aqueous solvents. To support this, the Examiner states that, as discussed in the previous Office Action, the present disclosure teaches the use of water up to 20% and Nyssen discloses the use of non-aqueous solvents in an amount up to 55%. The Examiner therefore concludes that Nyssen clearly reads on the present claimed invention, adding that, while claims are interpreted in light of the specification, limitations from the specification are not read into the claims.

Applicant respectfully disagrees. Regarding claims 21 and 23-28, as amended, claim 21 recites a pigment composition comprising a) at least one pigment, and b) at least one dispersant composition comprising i) at least one anionic surfactant and ii) at least one polymer

U.S. Patent Application No.: 10/694,974  
Art Unit: 1714  
Page 8

comprising at least one salt of a carboxylic acid group. Regarding claims 30-39 and 41, claim 30 recites a non-aqueous coating composition comprising a) a non-aqueous vehicle comprising a resin and a non-aqueous solvent, b) at least one pigment, and c) at least one dispersant composition comprising i) at least one anionic surfactant and ii) at least one polymer comprising at least one salt of a carboxylic acid group,. For both of these sets of claims, the pigment is a modified carbon product comprising a carbon product having attached at least one organic group, and wherein the organic group comprises at least one ionic group, at least one ionizable group, or a mixture thereof.

By comparison, Nyssen relates to paint and coating material systems comprising at least one solids component and at least one binder component. The solids component contains a pigment such as an acidic carbon black or a chemically surface modified carbon black, including a sulpho- or carboxyl-containing carbon black (see column 3, lines 43-47).

However, these are not the modified carbon products used in the pigment composition of the present invention. In particular, there is no disclosure, teaching, or suggestion of any attached organic group. Rather, the carbon blacks described in Nyssen are conventional oxidized or sulfonylated carbon blacks. Such blacks would include, for example, several of the carbon blacks shown in the Comparative Examples of the present application, such as M1300 and M1400. Since these are Comparative Examples, the carbon blacks of Nyssen would thus not be considered to be the modified carbon products recited in present claims 21 and 30.

Furthermore, the present specification clearly distinguishes oxidized carbon products, such as those of Nyssen, from modified carbon products. In particular, paragraph [0027] describes one embodiment of the present invention in which the pigment composition comprises carbon blacks that have been oxidized. Also, paragraph [0028] describes another embodiment of the present invention in which the pigment composition comprises a modified pigment, preferably a modified carbon product, having attached at least one organic group. Thus, the present specification clearly differentiates the oxidized carbon blacks, such as those described in Nyssen, from modified carbon blacks having attached organic groups.

U.S. Patent Application No.: 10/694,974  
Art Unit: 1714  
Page 9

Since a modified carbon product comprising a carbon product having attached at least one organic group is clearly differentiated from oxidized carbon blacks by the present specification, and since it is carboxyl-containing carbon blacks (i.e., oxidized carbon blacks) that are described in Nyssen, Applicants believe that modified carbon products, as the term is used in the present invention, is not taught or suggested in Nyssen. Furthermore, a pigment composition comprising such a modified carbon product, as recited in claim 20, as well as a non-aqueous coating composition comprising such a modified carbon product, as recited in claim 30, is also not taught or suggested by this reference.

However, in order to advance prosecution of the present application, Applicant has amended claims 21, 30, and 41 to more clearly distinguish the recited modified carbon products from oxidized carbon blacks, such as those described in Nyssen. In particular, as amended, each claim recites that the organic group comprises at least one ionic group, at least one ionizable group, or a mixture thereof. Such groups include, for example, the  $\text{-COO-}$  and  $\text{-COOH}$  groups pointed out by the Examiner, and these are further described in paragraph [0032] of the present specification. Thus, the modified pigment has attached an organic group, and this organic group comprises, for example, a carboxyl group or carboxylic acid group. These are therefore not oxidized carbon blacks, as in Nyssen.

Applicant therefore believes that claims 21, 30, and 41 are patentable over Nyssen. In addition, claims 24-28, which depend either directly or indirectly from claim 21, and claims 31-34 and 37-39, which depend directly from claim 30, recite further embodiments of the present invention and, for at least the reasons discussed above, are also patentable over this reference. Claims 23 and 36 have been cancelled, making the rejection of these claims moot. Furthermore, claim 35 was cancelled in the response filed September 23, 2005, also making the rejection of this claim moot.

Therefore, Applicant believes that claims 21, 23-28, 30-39, and 41 are patentable over Nyssen and respectfully request that this rejection be withdrawn.

U.S. Patent Application No.: 10/694,974  
Art Unit: 1714  
Page 10

Regarding new claims 42 and 43, Applicant believes these claims are also patentable over Nyssen. In particular, claim 42 recites a non-aqueous coating composition comprising a) a non-aqueous vehicle comprising a resin and a non-aqueous solvent, b) at least one pigment, and c) at least one dispersant composition comprising i) at least one anionic surfactant and ii) at least one polymer comprising at least one salt of a carboxylic acid group. Claim 43 recites a non-aqueous coating composition comprising a) a non-aqueous vehicle comprising a resin and a non-aqueous solvent, and b) a pigment composition, wherein the pigment composition comprises a pigment and at least one dispersant composition comprising i) at least one anionic surfactant and ii) at least one polymer comprising at least one salt of a carboxylic acid group. For both of these claims, the pigment is a modified carbon product comprising a carbon product having attached at least one organic group, and the non-aqueous solvent comprises 0-20% water.

By comparison, as discussed in more detail above, Nyssen relates to paint and coating material systems comprising at least one solids component and at least one binder component. While the solids component contains a pigment, there is no disclosure, teaching, or suggestion of a modified carbon product comprising a pigment having attached at least one organic group. Since a modified carbon product comprising a carbon product having attached at least one organic group is not taught or suggested, a coating composition comprising such a modified carbon product is also not taught or suggested.

Furthermore, and as acknowledged by the Examiner in the Office Action mailed March 30, 2005, Nyssen relates to aqueous coating compositions. There is no disclosure, teaching, or suggestion anywhere in Nyssen of a non-aqueous coating composition. Considering the reference as a whole (see, for example, column 1, line 21 to column 2, line 27, column 2, lines 60-66, column 11, line 33 to column 12, line 13, and column 12, lines 27-34), one skilled in the art would not consider Nyssen as art relating to non-aqueous coating compositions. Further support includes claim 1, which recites "wherein the components of the system produce an aqueous dispersion". Thus, Nyssen is non-analogous art since it relates to aqueous systems.

U.S. Patent Application No.: 10/694,974

Art Unit: 1714

Page 11

In addition, while Nyssen states that a solvent component may be a further component of the paint or binder system, and describes various types of non-aqueous solvents that can be included, the amount of such solvent is less than 55% based on the system (see column 10, lines 32-61). Thus, the amount of water would be 45% or more. This is not the non-aqueous coating composition recited in present claims 42 and 43, since each recite that the non-aqueous solvent comprises from 0-20% water (and is therefore 80-100% non-aqueous solvent). Nyssen does not disclose, teach, or suggest a non-aqueous coating composition comprising a non-aqueous solvent in which the non-aqueous solvent comprises 0-20% water.

Since claims 42 and 43 recite non-aqueous coating compositions comprising a non-aqueous vehicle which comprises a resin and a non-aqueous solvent, wherein the non-aqueous solvent comprises 0-20% water, Applicant believes these claims are also patentable over Nyssen.

#### Nyssen in view of Batdorf

The Examiner has rejected claims 29 and 40 under 35 U.S.C. § 103(a) as being unpatentable over Nyssen (WO 00/60015) in view of Batdorf (U.S. Patent No. 5,268,203).

In paragraph 6 of the Final Office Action, the Examiner incorporates by reference the rejection set forth in paragraph 9 of the Office Action mailed March 30, 2005. In addition, in paragraph 7 of the Final Office Action, the Examiner states that Applicant's arguments filed September 23, 2005 have been fully considered by are not persuasive, as discussed in more detail above.

Applicant respectfully disagrees. Claim 29 and 40 depend directly from claims 21 and 30 respectively and, as discussed in more detail above, Applicant believes claims 21 and 40, as amended, are patentable over Nyssen since this reference does not teach or suggest the modified carbon products of these claims. Therefore claims 29 and 40, which recite further embodiments of the present invention, are also patentable over this reference. Furthermore, Batdorf et al, which has been cited by the Examiner only for its disclosure of sodium dioctyl sulfosuccinate, does not cure the deficiencies of Nyssen. Applicant therefore believes that

U.S. Patent Application No.: 10/694,974  
Art Unit: 1714  
Page 12

claim 29 and 40 are also patentable over Nyssen in view of Batdorf et al.

Regarding new claims 42 and 43, as discussed in more detail above, Applicant believes there is no disclosure, teaching, or suggestion in Nyssen of the recited pigment composition since there is no disclosure, teaching, or suggestion of a modified carbon product comprising a carbon product having attached at least one organic group. In addition, Nyssen is non-analogous art since it describes only aqueous compositions whereas the present claim recites a non-aqueous coating composition comprising a non-aqueous vehicle which comprises a resin and a non-aqueous solvent, wherein the non-aqueous solvent comprises 0-20%. Furthermore, Batdorf et al, which has been cited by the Examiner only for its disclosure of sodium dioctyl sulfosuccinate, does not cure the deficiencies of Nyssen. Applicant therefore believes that new claims 42 and 43 are patentable over Nyssen in view of Batdorf et al.

### Conclusion

In view of the foregoing remarks, Applicant believes that this application is in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. If, in the opinion of the Examiner, a telephone conference would further expedite the prosecution of the subject application, the Examiner is invited to call the undersigned.

Respectfully submitted,

By: 

Robert M. Amici  
Reg. No. 52,554  
CABOT CORPORATION  
Law Department  
157 Concord Road  
Billerica, MA 01821-7001

Date: November 9, 2006  
Attorney Docket No.: 03090